

SEQUENCE LISTING

<110> Allen, Stephen

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<151> 1999-07-13

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<151> 2000-12-21

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 Ser Val Glu Ile Leu Phe Ser Arg His Cys Pro Ile Trp Tyr Asn Tyr
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 Gly Gly Arg Leu Lys Leu Leu Glu Arg Met Ala Tyr Ile Asn Thr Ile
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 Asn Ser Gly Tyr Gln Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe
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 Ser Ile Trp Val Ile Leu His Leu Tyr Pro Phe Leu Lys Gly Leu Met
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 Gly Lys Gln Asn Arg Thr Pro Thr Ile Val Ile Val Trp Ser Ile Leu
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Pro Gly Ile Trp Arg Ser Gly Ser Ala Arg Gly Met Glu Ala Ser Ala
50 55 60
Gly Leu Val Ala Gly Ser His Asn Arg Asn Glu Leu Val Val Ile Arg
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Arg Asp Gly Glu Pro Gly Pro Lys Pro Met Asp Gln Arg Asn Gly Gln
85 90 95
Val Cys Gln Ile Cys Gly Asp Asp Val Gly Arg Asn Pro Asp Gly Glu
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Pro Phe Val Ala Cys Asn Glu Cys Ala Phe Pro Ile Cys Arg Asp Cys
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Glu Glu Asp Gly Val Asp Asp Leu Glu Asn Glu Phe Asn Trp Ser Asp
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Lys His Asp Ser Gln Tyr Leu Ala Glu Ser Met Leu His Ala His Met
180 185 190
Ser Tyr Gly Arg Gly Ala Asp Leu Asp Gly Val Pro Gln Pro Phe His
195 200 205
Pro Ile Pro Asn Val Pro Leu Leu Thr Asn Gly Gln Met Val Asp Asp
210 215 220
Ile Pro Pro Asp Gln His Ala Leu Val Pro Ser Phe Val Gly Gly
225 230 235 240
Gly Lys Arg Ile His Pro Leu Pro Tyr Ala Asp Pro Asn Leu Pro Val
245 250 255

Gln Pro Arg Ser Met Asp Pro Ser Lys Asp Leu Ala Ala Tyr Gly Tyr
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Gly Ser Val Ala Trp Lys Glu Arg Met Glu Ser Trp Lys Gln Lys Gln
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Glu Arg Met His Gln Thr Arg Asn Asp Gly Gly Gly Asp Asp Gly Asp
290 295 300

Asp Ala Asp Leu Pro Leu Met Asp Glu Ala Arg Gln Pro Leu Ser Arg
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Lys Ile Pro Leu Pro Ser Ser Gln Ile Asn Pro Tyr Arg Met Ile Ile
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His Pro Val Pro Asp Ala Phe Ala Leu Trp Leu Ile Ser Val Ile Cys
355 360 365

Glu Ile Trp Phe Ala Met Ser Trp Ile Leu Asp Gln Phe Pro Lys Trp
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Phe Pro Ile Glu Arg Glu Thr Tyr Leu Asp Arg Leu Ser Leu Arg Phe
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Asp Lys Glu Gly His Pro Ser Gln Leu Ala Pro Val Asp Phe Phe Val
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Ser Thr Val Asp Pro Leu Lys Glu Pro Pro Leu Val Thr Ala Asn Thr
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Val Leu Ser Ile Leu Ser Val Asp Tyr Pro Val Asp Lys Val Ser Cys
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Tyr Val Ser Asp Asp Gly Ala Ala Met Leu Thr Phe Glu Ala Leu Ser
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Glu Thr Ser Glu Phe Ala Lys Lys Trp Val Pro Phe Cys Lys Arg Tyr
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Ser Leu Glu Pro Arg Ala Pro Glu Trp Tyr Phe Gln Gln Lys Ile Asp
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Tyr Leu Lys Asp Lys Val Ala Pro Asn Phe Val Arg Glu Arg Arg Ala
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Met Lys Arg Glu Tyr Glu Glu Phe Lys Val Arg Ile Asn Ala Leu Val
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Ala Lys Ala Gln Lys Val Pro Glu Glu Gly Trp Thr Met Gln Asp Gly
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Val Phe Leu Gly Gln Ser Gly Gly His Asp Val Glu Gly Asn Glu Leu
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Pro Arg Leu Val Tyr Val Ser Arg Glu Lys Arg Pro Gly Tyr Asn His
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 Leu Thr Asn Ala Pro Tyr Leu Leu Asn Leu Asp Cys Asp His Tyr Ile
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 Cys Ile Pro Lys Arg Ala Ala Phe Lys Gly Ser Ala Pro Leu Asn Leu
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 Gln Gly Leu Leu Lys Val Ile Ala Gly Val Asp Thr Ser Phe Thr Val
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 Ser Val Glu Ile Phe Met Ser Arg His Cys Pro Leu Trp Tyr Ala Tyr
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 Gly Gly Arg Leu Lys Trp Leu Glu Arg Phe Ala Tyr Thr Asn Thr Ile
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 Val Tyr Pro Phe Thr Ser Ile Pro Leu Leu Ala Tyr Cys Thr Ile Pro
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 Ala Val Cys Leu Leu Thr Gly Lys Phe Ile Ile Pro Thr Leu Asn Asn
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 165 170 175

 Ala Val Phe Gln Gly Phe Leu Lys Val Leu Gly Gly Val Asp Thr Ser
 180 185 190

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Asp Leu Tyr Leu Phe Lys Trp Thr Thr Leu Leu Val Pro Pro Thr Thr
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Leu Ile Ile Ile Asn Met Val Gly Ile Val Ala Gly Val Ser Asp Ala
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Val Asn Asn Gly Tyr Gly Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe
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Met Gly Arg Gln Asn Arg Thr Pro Thr Ile Val Val Leu Trp Ser Ile
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 865 870 875 880
 Ile Cys Leu Leu Thr Gly Lys Phe Ile Thr Pro Glu Leu Asn Asn Val
 885 890 895
 Ala Ser Leu Trp Phe Met Ser Leu Phe Ile Cys Ile Phe Ala Thr Ser
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 Asn Glu Gln Phe Trp Val Ile Gly Gly Val Ser Ser His Leu Phe Ala
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 Val Phe Gln Gly Leu Leu Lys Val Ile Ala Gly Val Asp Thr Ser Phe
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 Thr Val Thr Ser Lys Gly Gly Asp Asp Glu Glu Phe Ser Glu Leu Tyr
 965 970 975
 Thr Phe Lys Trp Thr Thr Leu Leu Ile Pro Pro Thr Thr Leu Leu Leu
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 Leu Asn Phe Ile Gly Val Val Ala Gly Val Ser Asn Ala Ile Asn Asn
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 Gly Tyr Glu Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe
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 Trp Val Ile Val His Leu Tyr Pro Phe Leu Lys Gly Leu Val Gly Arg
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 Gln Asn Arg Thr Pro Thr Ile Val Ile Val Trp Ser Ile Leu Leu Ala
 1045 1050 1055
 Ser Ile Phe Ser Leu Leu Trp Val Arg Ile Asp Pro Phe Leu Ala Lys
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<212> DNA
<213> Oryza sativa

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Ala Gly Ala Glu Val Thr Arg Asn Ala Val Val Glu Ala Ala Arg Phe
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Ala Ala Leu Trp Val Ser Phe Cys Arg Lys His Gly Val Glu Pro Arg
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Asn Leu Glu Ala Tyr Phe Asn Ala Gly Glu Gly Gly Gly Lys Ala
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Lys Val Val Ala Arg Gly Ser Tyr Arg Gly Met Ala Trp Pro Glu Leu
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Val Arg Asp Arg Arg Val Arg Arg Glu Tyr Glu Glu Met Arg Leu
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Arg Ile Asp Ala Leu Gln Ala Ala Asp Ala Arg Arg Arg Arg Arg Gly
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 Val Ala Ser Val Asp Val Cys Leu Pro Ala Leu Val Tyr Val Cys Arg
 180 185 190
 Glu Lys Arg Arg Gly His Ala His His Arg Lys Ala Gly Ala Met Asn
 195 200 205
 Ala Pro Phe Ile Leu Asp Leu Asp Cys Asp Tyr Tyr Val Asn Asn Ser
 210 215 220
 Gln Ala Leu Arg Ala Gly Ile Cys Phe Met Ile Glu Arg Gly Gly Gly
 225 230 235 240
 Gly Ala Ala Glu Asp Ala Gly Ala Val Ala Phe Val Gln Phe Pro Gln
 245 250 255
 Arg Val Asp Gly Val Asp Pro Gly Asp Arg Tyr Ala Asn His Asn Arg
 260 265 270
 Val Leu Phe Asp Cys Thr Glu Leu Gly Leu Asp Gly Leu Gln Gly Pro
 275 280 285
 Ile Tyr Val Gly Thr Gly Cys Leu Phe Arg Arg Val Ala Leu Tyr Ser
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 Val Asp Leu Pro Arg Trp Arg Pro Arg Arg Ser Leu Gly Cys Arg Leu
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 65 70 75 80
 Gln Cys Lys Thr Arg Tyr Lys Arg Leu Lys Gly Ser Pro Arg Val Glu
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 Gly Asp Asp Asp Glu Glu Asp Val Asp Asp Ile Glu His Glu Phe Asn
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 Ile Asp Glu Gln Lys Asn Lys His Gly Gln Val Ala Glu Ala Met Leu
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 His Gly Arg Met Ser Tyr Gly Arg Gly Pro Glu Asp Asp Asn Ser
 130 135 140
 Gln Phe Pro Thr Pro Val Ile Ala Gly Gly Arg Ser Arg Pro Val Ser
 145 150 155 160
 Gly Glu Phe Pro Ile Ser Ser Asn Ala Tyr Gly Asp Gln Met Leu Ser
 165 170 175
 Ser Ser Leu His Lys Arg Val His Pro Tyr Pro Val Ser Glu Pro Gly
 180 185 190
 Ser Ala Arg Trp Asp Glu Lys Lys Xaa Asp Gly Trp Lys Asp Arg Met
 195 200 205
 Asp Asp Trp Lys Leu Gln Gln Gly Asn Leu Gly Pro Glu Pro Asp Glu
 210 215 220
 Asp Pro Asp Ala Ala Met Leu Asp Glu Ala Arg Gln Pro Leu Ser Arg
 225 230 240
 Lys Val Pro Ile Ala Ser Ser Lys Ile Asn Pro Tyr Arg Met Val Ile
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 Val Ala Arg Leu Val Ile Leu Ala Phe Phe Leu Arg Tyr Arg Leu Met
 260 265 270
 Asn Pro Val His Asp Ala Leu Gly Leu Trp Leu Thr Ser Ile Ile Cys
 275 280 285
 Glu Ile Trp Phe Ala Phe Ser Trp Ile Leu Asp Gln Phe Pro Lys Trp
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 Phe Pro Ile Asp Arg Glu Thr Tyr Leu Asp Arg Leu Ser Ile Arg Tyr
 305 310 320
 Glu Arg Glu Gly Glu Pro Asn Met Leu Ala Pro Val Asp Val Phe Val
 325 330 335
 Ser Thr Val Asp Pro Met Lys Glu Pro Pro Leu Val Thr Ala Asn Thr
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Val Leu Ser Ile Leu Ala Met Asp Tyr Pro Val Asp Lys Ile Ser Cys
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 Tyr Ile Ser Asp Asp Gly Ala Ser Met Cys Thr Phe Glu Ser Leu Ser
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 Glu Thr Ala Glu Phe Ala Arg Lys Trp Val Pro Phe Cys Lys Lys Phe
 385 390 395 400

 Ser Ile Glu Pro Arg Ala Pro Glu Met Tyr Phe Ser Glu Lys Ile Asp
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 Tyr Leu Lys Asp Lys Val Gln Pro Thr Phe Val Lys Glu Arg Arg Ala
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 Met Lys Arg Glu Tyr Glu Glu Phe Lys Val Arg Ile Asn Ala Leu Val
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 Ala Lys Ala Gln Lys Val Pro Gln Gly Gly Trp Ile Met Gln Asp Gly
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 Val Phe Leu Gly Ser Ser Gly Gly Leu Asp Thr Glu Gly Asn Gln Leu
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 Pro Arg Leu Val Tyr Val Ser Arg Glu Lys Arg Pro Gly Phe Gln His
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 His Lys Lys Ala Gly Ala Met Asn Ala Leu Val Arg Val Ser Ala Val
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 Asp Ile Asn Met Lys Gly Leu Asp Gly Ile Gln Gly Pro Val Tyr Val
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 Gly Thr Gly Cys Val Phe Arg Arg Gln Ala Leu Tyr Gly Tyr Asn Pro
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 Asp Lys Thr Glu Trp Gly Leu Glu Leu Gly Trp Ile Tyr Gly Ser Ile
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 Asn Asn Gly Tyr Gln Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe
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 Ser Phe Trp Val Ile Val His Leu Tyr Pro Phe Leu Lys Gly Leu Met
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Gly Arg Gln Asn Arg Thr Pro Thr Ile Val Val Ile Trp Ser Val Leu
995 1000 1005

Leu Ala Ser Ile Phe Ser Leu Leu Trp Val Arg Ile Asp Pro Phe Val
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 Pro Arg Leu Val Tyr Val Ser Arg Glu Lys Arg Pro Gly Phe Gln His
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 His Lys Lys Ala Gly Ala Met Asn Ala Leu Ile Arg Val Ser Ala Val
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 115 120 125
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 180 185 190
 Cys Gly Ser Arg Lys Lys Gly Lys Gly Asn Lys Lys Tyr Ser Asp
 195 200 205
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 225 230 235 240
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 245 250 255
 Val Phe Ile Ala Ala Thr Phe Met Glu Gln Gly Gly Ile Pro Pro Ser
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 Thr Asn Pro Ala Thr Leu Leu Lys Glu Ala Ile His Val Ile Ser Cys
 275 280 285
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 Gly Ser Val Thr Glu Asp Ile Leu Thr Gly Phe Lys Met His Ala Arg
 305 310 315 320

Gly Trp Ile Ser Ile Tyr Cys Met Pro Pro Arg Pro Ala Phe Lys Gly
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 Tyr Gly Tyr Asn Gly Lys Leu Lys Pro Leu Met Arg Leu Ala Tyr Ile
 370 375 380

 Asn Thr Ile Val Tyr Pro Phe Thr Ser Ile Pro Leu Ile Ala Tyr Cys
 385 390 395 400

 Thr Leu Pro Ala Phe Cys Leu Leu Thr Asn Lys Phe Ile Ile Pro Glu
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 Ile Ser Asn Phe Ala Ser Met Trp Phe Ile Leu Leu Phe Val Ser Ile
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 450 455 460

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 465 470 475 480

 Asp Thr Asn Phe Thr Val Thr Ser Lys Ala Ser Asp Glu Asp Gly Asp
 485 490 495

 Phe Ala Glu Leu Tyr Val Phe Lys Trp Thr Ser Leu Leu Ile Pro Pro
 500 505 510

 Thr Thr Val Leu Ile Val Asn Leu Val Gly Ile Val Ala Gly Val Ser
 515 520 525

 Tyr Ala Ile Asn Ser Gly Tyr Gln Ser Trp Gly Pro Leu Phe Gly Lys
 530 535 540

 Leu Phe Phe Ala Ile Trp Val Ile Ala His Leu Tyr Pro Phe Leu Lys
 545 550 555 560

 Gly Leu Leu Gly Arg Gln Asn Arg Thr Pro Thr Ile Val Ile Val Trp
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 Ser Val Leu Leu Ala Ser Ile Phe Ser Leu Leu Trp Val Arg Ile Asp
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 Pro Phe Thr Ser Asp Ser Asn Lys Leu Thr Asn Gly Gln Cys Gly Ile
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 <210> 17
 <211> 2890

TOPB2007/CE2008

<212> DNA

<213> Glycine max

<400> 17

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<211> 793

<212> PRT

<213> Glycine max

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 Pro Lys Trp Tyr Pro Ile Gln Arg Glu Thr Tyr Leu Asp Arg Leu Ser
 35 40 45
 Leu Arg Tyr Glu Lys Glu Gly Lys Pro Ser Glu Leu Ser Ser Val Asp
 50 55 60
 Val Phe Val Ser Thr Val Asp Pro Met Lys Glu Pro Pro Leu Ile Thr
 65 70 75 80
 Ala Asn Thr Val Leu Ser Ile Leu Ala Val Asp Tyr Pro Val Asp Lys
 85 90 95
 Val Ala Cys Tyr Val Ser Asp Asp Gly Ala Ala Met Leu Thr Phe Glu
 100 105 110
 Ala Leu Ser Glu Thr Ser Glu Phe Ala Arg Arg Trp Val Pro Phe Cys
 115 120 125
 Lys Lys Tyr Asn Ile Glu Pro Arg Ala Pro Glu Trp Tyr Phe Gly Gln
 130 135 140
 Lys Met Asp Tyr Leu Lys Asn Lys Val His Pro Ala Phe Val Arg Glu
 145 150 155 160
 Arg Arg Ala Met Lys Arg Asp Tyr Glu Glu Phe Lys Val Arg Ile Asn
 165 170 175
 Ser Leu Val Ala Thr Ala Gln Lys Val Pro Glu Asp Gly Trp Thr Met
 180 185 190
 Gln Asp Gly Thr Pro Trp Pro Gly Asn Asn Val Arg Asp His Pro Gly
 195 200 205
 Met Ile Gln Val Phe Leu Gly Gln Asp Gly Val Arg Asp Val Glu Gly
 210 215 220
 Asn Glu Leu Pro Arg Leu Val Tyr Val Ser Arg Glu Lys Arg Pro Gly
 225 230 235 240
 Phe Asp His His Lys Lys Ala Gly Ala Met Asn Ala Leu Val Arg Ala
 245 250 255
 Ser Ala Ile Ile Thr Asn Ala Pro Tyr Leu Leu Asn Val Asp Cys Asp
 260 265 270
 His Tyr Ile Asn Asn Ser Lys Ala Leu Arg Glu Ala Met Cys Phe Met
 275 280 285
 Met Asp Pro Gln Leu Gly Lys Lys Val Cys Tyr Val Gln Phe Pro Gln
 290 295 300
 Arg Phe Asp Gly Ile Asp Arg His Asp Arg Tyr Ser Asn Arg Asn Val
 305 310 315 320

Val Phe Phe Asp Ile Asn Met Lys Gly Leu Asp Gly Ile Gln Gly Pro
 325 330 335

 Ile Tyr Val Gly Thr Gly Cys Val Phe Arg Arg Tyr Ala Leu Tyr Gly
 340 345 350

 Tyr Asp Ala Pro Ala Lys Lys Pro Pro Ser Lys Thr Cys Asn Cys
 355 360 365

 Trp Pro Lys Trp Cys Cys Leu Cys Cys Gly Ser Arg Lys Lys Lys Asn
 370 375 380

 Ala Asn Ser Lys Lys Glu Lys Lys Arg Lys Val Lys His Ser Glu Ala
 385 390 395 400

 Ser Lys Gln Ile His Ala Leu Glu Asn Ile Glu Ala Gly Asn Glu Gly
 405 410 415

 Thr Asn Asn Glu Lys Thr Ser Asn Leu Thr Gln Thr Lys Leu Glu Lys
 420 425 430

 Arg Phe Gly Gln Ser Pro Val Phe Val Ala Ser Thr Leu Leu Asp Asp
 435 440 445

 Gly Gly Val Pro His Gly Val Ser Pro Ala Ser Leu Leu Lys Glu Ala
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 Ile Gln Val Ile Ser Cys Gly Tyr Glu Asp Lys Thr Glu Trp Gly Lys
 465 470 475 480

 Glu Val Gly Trp Ile Tyr Gly Ser Val Thr Glu Asp Ile Leu Thr Gly
 485 490 495

 Phe Lys Met His Cys His Gly Trp Arg Ser Val Tyr Cys Ile Pro Lys
 500 505 510

 Arg Pro Ala Phe Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp Arg Leu
 515 520 525

 His Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu Ile Phe Phe Ser
 530 535 540

 Arg His Cys Pro Ile Trp Tyr Gly Tyr Gly Gly Leu Lys Leu Leu
 545 550 555 560

 Glu Arg Phe Ser Tyr Ile Asn Ser Val Val Tyr Pro Trp Thr Ser Leu
 565 570 575

 Pro Leu Leu Val Tyr Cys Thr Leu Pro Ala Ile Cys Leu Leu Thr Gly
 580 585 590

 Lys Phe Ile Val Pro Glu Ile Ser Asn Tyr Ala Ser Leu Val Phe Met
 595 600 605

 Ala Leu Phe Ile Ser Ile Ala Ala Thr Gly Ile Leu Glu Met Gln Trp
 610 615 620

 Gly Gly Val Ser Ile Asp Asp Trp Trp Arg Asn Glu Gln Phe Trp Val
 625 630 635 640

Ile Gly Gly Val Ser Ser His Leu Phe Ala Leu Phe Gln Gly Leu Leu
645 650 655

Lys Val Leu Ala Gly Val Asn Thr Asn Phe Thr Val Thr Ser Lys Ala
660 665 670

Ala Asp Asp Gly Glu Phe Ser Glu Leu Tyr Ile Phe Lys Trp Thr Ser
675 680 685

Leu Leu Ile Pro Pro Met Thr Leu Leu Ile Met Asn Ile Val Gly Val
690 695 700

Val Val Gly Ile Ser Asp Ala Ile Asn Asn Gly Tyr Asp Ser Trp Gly
705 710 715 720

Pro Leu Phe Gly Arg Leu Phe Phe Ala Leu Trp Val Ile Leu His Leu
725 730 735

Tyr Pro Phe Leu Lys Gly Leu Leu Gly Lys Gln Asp Arg Met Pro Thr
740 745 750

Ile Ile Leu Val Trp Ser Ile Leu Leu Ala Ser Ile Leu Thr Leu Met
755 760 765

Trp Val Arg Ile Asn Pro Phe Val Ser Arg Asp Gly Pro Val Leu Glu
770 775 780

Ile Cys Gly Leu Asn Cys Asp Glu Ser
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<212> DNA
<213> Triticum aestivum
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<220>
<221> unsure
<222> (262)

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 35 40 45
 Asp Gly Ile Gln Gly Pro Val Tyr Val Gly Thr Gly Cys Val Phe Asn
 50 55 60
 Arg Thr Ala Ile Tyr Gly Tyr Glu Pro Pro Ile Lys Ala Lys Lys Pro
 65 70 75 80
 Gly Phe Leu Ala Ser Leu Cys Xaa Gly Lys Lys Lys Ala Ser Lys Ser
 85 90 95
 Lys Lys Arg Ser Ser Asp Lys Lys Ser Asn Lys His Val Asp Ser
 100 105 110
 Ser Val Pro Val Phe Asn Leu Glu Asp Ile Glu Glu Gly Val Glu Gly
 115 120 125
 Ala Gly Phe Asp Asp Glu Lys Ser Val Leu Met Ser Gln Met Ser Leu
 130 135 140
 Glu Lys Arg Phe Gly Gln Ser Ala Ala Phe Val Ala Ser Thr Leu Met
 145 150 155 160
 Glu Tyr Gly Gly Val Pro Gln Ser Ser Thr Pro Glu Ser Leu Leu Lys
 165 170 175
 Glu Ala Ile His Val Ile Ser Cys Gly Tyr Glu Asp Lys Ser Glu Trp
 180 185 190

Gly Thr Glu Ile Gly Trp Ile Tyr Gly Ser Val Thr Glu Asp Ile Leu
 195 200 205
 Thr Gly Phe Lys Met His Ala Arg Gly Trp Arg Ser Ile Tyr Cys Met
 210 215 220
 Pro Lys Arg Pro Ala Phe Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp
 225 230 235 240
 Arg Leu Asn Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu Ile Leu
 245 250 255
 Phe Ser Arg His Cys Pro Leu Trp Tyr Gly Tyr Gly Gly Arg Leu Lys
 260 265 270
 Phe Leu Glu Arg Phe Ala Tyr Ile Asn Thr Thr Ile Tyr Pro Leu Thr
 275 280 285
 Ser Leu Pro Leu Leu Val Tyr Cys Ile Leu Pro Ala Ile Cys Leu Leu
 290 295 300
 Thr Gly Lys Phe Ile Met Pro Glu Ile Ser Asn Leu Ala Ser Ile Trp
 305 310 315 320
 Phe Ile Ala Leu Phe Leu Ser Ile Phe Ala Thr Gly Ile Leu Glu Met
 325 330 335
 Arg Trp Ser Gly Val Gly Ile Asp Glu Trp Trp Arg Asn Glu Gln Phe
 340 345 350
 Trp Val Ile Gly Gly Ile Ser Ala His Leu Phe Ala Val Phe Gln Gly
 355 360 365
 Leu Leu Lys Val Leu Ala Gly Ile Asp Thr Asn Phe Thr Val Thr Ser
 370 375 380
 Lys Ala Asn Asp Glu Glu Gly Asp Phe Ala Glu Leu Tyr Met Phe Lys
 385 390 395 400
 Trp Thr Thr Leu Leu Ile Pro Pro Thr Thr Ile Leu Ile Ile Asn Met
 405 410 415
 Val Gly Val Val Ala Gly Thr Ser Tyr Ala Ile Asn Ser Gly Tyr Gln
 420 425 430
 Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe Trp Val Ile
 435 440 445
 Val His Leu Tyr Pro Phe Leu Lys Gly Leu Met Gly Arg Gln Asn Arg
 450 455 460
 Thr Pro Thr Ile Val Ile Val Trp Ala Val Leu Leu Ala Ser Ile Phe
 465 470 475 480
 Ser Leu Leu Trp Val Arg Val Asp Pro Phe Thr Thr Arg Leu Ala Gly
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 <212> DNA
 <213> Triticum aestivum

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<210> 22
 <211> 340
 <212> PRT
 <213> Triticum aestivum

<400> 22
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Arg Ile His Pro Leu Pro Phe Ala Asp Pro Asn Leu Pro Val Gln Pro
 35 40 45

Arg Ser Met Asp Pro Ser Lys Asp Leu Ala Ala Tyr Gly Tyr Gly Ser
 50 55 60

Val Ala Trp Lys Glu Arg Met Glu Gly Trp Lys Gln Lys Gln Glu Arg
 65 70 75 80

Leu Gln His Val Arg Ser Glu Gly Gly Asp Trp Asp Gly Asp Asp
 85 90 95

Ala Asp Leu Pro Leu Met Asp Glu Ala Arg Gln Pro Leu Ser Arg Lys
 100 105 110

Val Pro Ile Ser Ser Arg Ile Asn Pro Tyr Arg Met Ile Ile Val
 115 120 125

Ile Arg Leu Val Val Leu Gly Phe Phe His Tyr Arg Val Met His
 130 135 140

Pro Ala Lys Asp Ala Phe Ala Leu Trp Leu Ile Ser Val Ile Cys Glu
 145 150 155 160

Ile Trp Phe Ala Met Ser Cys Ile Leu Asp Gln Phe Pro Lys Trp Phe
165 170 175

Pro Ile Glu Arg Glu Thr Tyr Leu Asp Arg Leu Ser Leu Arg Phe Asp
180 185 190

Lys Glu Gly Gln Pro Ser Gln Leu Ala Pro Ile Asp Phe Phe Val Ser
195 200 205

Thr Val Asp Pro Thr Lys Glu Pro Pro Leu Val Thr Ala Asn Thr Val
210 215 220

Leu Ser Ile Leu Ser Val Asp Tyr Pro Val Glu Lys Val Ser Cys Tyr
225 230 235 240

Val Ser Asp Asp Gly Ala Ala Met Leu Thr Phe Glu Ala Leu Ser Glu
245 250 255

Thr Ser Glu Phe Ala Lys Lys Trp Val Pro Phe Ser Lys Lys Phe Asn
260 265 270

Ile Glu Pro Arg Ala Pro Glu Trp Tyr Phe Gln Gln Lys Ile Asp Tyr
275 280 285

Leu Lys Asp Lys Val Ala Ala Ser Phe Val Arg Glu Arg Arg Ala Met
290 295 300

Lys Arg Glu Tyr Glu Glu Phe Lys Val Arg Ile Asn Ala Leu Val Ala
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Lys Ala Gln Lys Val Pro Glu Glu Gly Trp Thr Met Gln Asp Gly Ser
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Pro Trp Pro Gly
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<210> 23

<211> 2663

<212> DNA

<213> Picramnia pentandra

<400> 23

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<210> 24
 <211> 740
 <212> PRT
 <213> Picramnia pentandra

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Thr	Val	Leu	Ser	Ile	Leu	Ala	Val	Asp	Tyr	Pro	Val	Asp	Lys	Val	Thr
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Cys	Tyr	Val	Ser	Asp	Asp	Gly	Ala	Ala	Met	Leu	Thr	Phe	Glu	Ala	Leu
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Ser	Glu	Thr	Ser	Glu	Phe	Ala	Arg	Lys	Trp	Val	Pro	Phe	Cys	Lys	Lys
65					70				75				80		

Phe	Ser	Ile	Glu	Pro	Arg	Ala	Pro	Glu	Trp	Tyr	Phe	Ser	Gln	Lys	Met
85									90				95		

Asp	Tyr	Leu	Lys	Asn	Lys	Val	His	Pro	Ser	Phe	Val	Arg	Glu	Arg	Arg
100						105						110			

Ala	Met	Lys	Arg	Glu	Tyr	Glu	Val	Phe	Lys	Val	Arg	Ile	Asn	Gly	Leu
115						120					125				

Val Ala Met Ala Gln Lys Val Pro Glu Asp Gly Trp Thr Met Gln Asp
 130 135 140
 Gly Thr Pro Trp Pro Gly Asn Asn Val Arg Asp His Pro Gly Met Ile
 145 150 155 160
 Gln Val Phe Leu Gly His Asn Gly Val Arg Asp Val Glu Gly Asn Glu
 165 170 175
 Leu Pro Arg Leu Ile Tyr Val Ser Arg Glu Lys Arg Pro Gly Phe Glu
 180 185 190
 His His Lys Lys Ala Gly Ala Met Asn Ser Leu Val Arg Val Ser Ala
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 Val Ile Ser Asn Ala Pro Tyr Ile Leu Asn Val Asp Cys Asp His Tyr
 210 215 220
 Ile Asn Asn Ser Lys Ala Leu Arg Glu Ala Met Cys Phe Met Met Asp
 225 230 235 240
 Pro Thr Ser Gly Lys Lys Leu Cys Tyr Val Gln Phe Pro Gln Arg Phe
 245 250 255
 Asp Gly Ile Asp Arg His Asp Arg Tyr Ser Asn Arg Asn Val Val Phe
 260 265 270
 Phe Asp Ile Asn Met Lys Gly Leu Asp Gly Ile Gln Gly Pro Ile Tyr
 275 280 285
 Val Gly Thr Gly Cys Val Phe Arg Arg Val Ala Leu Tyr Gly Tyr Asp
 290 295 300
 Ala Pro Val Thr Lys Lys Ser Pro Gly Lys Ala Cys Asn Cys Trp Pro
 305 310 315 320
 Lys Trp Leu Cys Cys Cys Gly Ser Arg Lys Asn Lys Lys Ser Lys
 325 330 335
 Pro Lys Lys Glu Lys Lys Ser Lys Asn Arg Glu Ala Ser Lys Gln
 340 345 350
 Ile His Ala Leu Glu Asn Ile Glu Glu Gly Met Gly Gly Leu Asn Ser
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 Glu Lys Ser Cys Glu Thr Thr Pro Leu Lys Leu Glu Lys Lys Phe Gly
 370 375 380
 Gln Ser Pro Val Phe Val Ala Ser Thr Leu Leu Glu Asp Gly Gly Val
 385 390 395 400
 Pro Gln Asp Ala Thr Pro Ala Ala Leu Leu Lys Glu Ala Ile Gln Val
 405 410 415
 Ile Ser Cys Gly Tyr Glu Asp Lys Thr Glu Trp Gly Lys Glu Val Gly
 420 425 430
 Trp Ile Tyr Gly Ser Val Thr Glu Asp Ile Leu Thr Gly Phe Lys Met
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His Cys His Gly Trp Arg Ser Val Tyr Cys Met Pro Ala Arg Pro Ala
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 Phe Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp Arg Leu His Gln Val
 465 470 475 480
 Leu Arg Trp Ala Leu Gly Ser Val Glu Ile Phe Leu Ser Arg His Cys
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 Pro Leu Trp Tyr Gly Tyr Gly Gly Leu Lys Trp Leu Glu Arg Phe
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 Val Tyr Cys Thr Leu Pro Ala Ile Cys Leu Leu Thr Gly Lys Phe Ile
 530 535 540
 Val Pro Glu Ile Ser Asn Tyr Ala Ser Ile Leu Phe Met Leu Leu Phe
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 Ile Phe Ile Ala Ala Thr Ser Ile Leu Glu Met Gln Trp Gly Gly Val
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 Gly Asp Phe Ser Glu Leu Tyr Leu Phe Lys Trp Thr Thr Leu Leu Ile
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 645 650 655
 Val Ser Asp Ala Ile Asn Asn Gly Tyr Asp Ser Trp Gly Pro Leu Phe
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 675 680 685
 Leu Lys Gly Leu Leu Gly Lys Gln Asp Arg Thr Pro Thr Ile Ile Val
 690 695 700
 Val Trp Ser Ile Leu Leu Ala Ser Ile Leu Thr Leu Leu Trp Val Arg
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 Leu Asn Cys Asp
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植物学报

<210> 25
<211> 3563
<212> DNA
<213> Impatiens balsamia

<400> 25

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<212> PRT
<213> Impatiens balsamia

<400> 26
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Leu Lys Glu Ala Asn Gly Gln Ile Cys Gln Ile Cys Gly Asp Thr Val
35 40 45

Gly Lys Ser Ala Thr Gly Asp Thr Phe Val Ala Cys Asn Glu Cys Gly
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Phe Pro Val Cys Arg Pro Cys Tyr Glu Tyr Glu Arg Lys Asp Gly Asn
65 70 75 80

Gln Cys Cys Pro Gln Cys Lys Thr Arg Tyr Lys Arg Gln Lys Gly Ser
85 90 95

Pro Arg Val Glu Gly Asp Glu Glu Glu Asp Val Asp Asp Leu Glu
100 105 110

Asn Glu Phe Asn Tyr Ser Gly Lys Gly Lys Asn Gln Lys Lys Val Thr
115 120 125

Thr Ala Arg Arg Pro Trp Gln Gly Asp Gln Gln Asp Ile Glu Leu Ser
130 135 140

Val Ser Ser Ser Arg His Asp Glu Ser Gln Gln Pro Val Pro Leu Leu
145 150 155 160

Thr His Gly His Ser Val Ser Gly Glu Ile Pro Thr Pro Asp Asn His
165 170 175

Ser Ile Arg Thr Thr Ser Gly Pro Ile Gly Pro Val Glu Lys Ser Ile
180 185 190

Pro Tyr Ile Asp Pro Arg Gln Pro Val Ala Val Arg Ile Ile Val Asp
195 200 205

Pro Ser Lys Asp Leu Asn Ser Tyr Gly Leu Gly Asn Val Asp Trp Lys
210 215 220

Glu Arg Val Glu Gly Trp Lys Leu Lys Gln Glu Lys Asn Met Val Gln
225 230 235 240

Met Thr Ser Arg Tyr Pro Glu Gly Lys Gly Asp Thr Glu Gly Thr Gly
 245 250 255
 Ser Asn Gly Glu Glu Leu Gln Met Ala Ala Asp Asp Ile Arg Gln Pro
 260 265 270
 Met Ser Arg Ile Val Pro Ile Ser Ser Thr His Leu Thr Pro Tyr Arg
 275 280 285
 Val Val Ile Ile Leu Arg Leu Ile Leu Gly Phe Phe Leu Gln Tyr
 290 295 300
 Arg Cys Thr His Pro Val Lys Asp Ala Tyr Pro Leu Trp Leu Thr Ser
 305 310 315 320
 Val Ile Cys Glu Val Trp Phe Ala Leu Ser Trp Leu Leu Asp Gln Phe
 325 330 335
 Pro Lys Trp Ser Pro Val Asn Arg Glu Thr Tyr Leu Asp Arg Leu Ser
 340 345 350
 Met Arg Phe Asp Arg Glu Gly Glu Pro Ser Gln Leu Ala Pro Ile Asp
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 Val Phe Val Ser Thr Val Asp Pro Leu Lys Glu Pro Pro Leu Val Thr
 370 375 380
 Ala Asn Thr Val Leu Ser Ile Leu Ala Val Asp Tyr Pro Val Asp Lys
 385 390 395 400
 Val Ser Cys Tyr Val Ser Asp Asp Gly Ser Ala Met Leu Thr Phe Glu
 405 410 415
 Ala Leu Ser Glu Thr Ala Glu Phe Ala Lys Lys Trp Ala Pro Phe Cys
 420 425 430
 Lys Lys His Ser Ile Glu Pro Arg Ala Pro Glu Phe Tyr Phe Ala Gln
 435 440 445
 Lys Ile Asp Tyr Leu Lys Asp Val Gln Pro Ser Phe Val Lys Glu
 450 455 460
 Arg Arg Ala Met Lys Arg Glu Tyr Glu Glu Phe Lys Val Arg Ile Asn
 465 470 475 480
 Ala Leu Val Ala Lys Ala Gln Lys Val Pro Glu Glu Gly Trp Thr Met
 485 490 495
 Gln Asp Gly Thr Pro Trp Pro Gly Asn Asn Ser Arg Asp His Pro Gly
 500 505 510
 Met Ile Gln Val Phe Leu Gly His Ser Gly Gly Phe Asp Thr Glu Gly
 515 520 525
 Asn Glu Leu Pro Arg Leu Val Tyr Val Ser Arg Glu Lys Arg Pro Gly
 530 535 540
 Phe Gln His His Lys Lys Ala Gly Ala Met Asn Ala Leu Ile Arg Val
 545 550 555 560

Ser Ala Val Leu Thr Asn Gly Ala Tyr Leu Leu Asn Val Asp Cys Asp
 565 570 575
 His Tyr Phe Asn Asn Ser Lys Cys Leu Lys Glu Ala Met Cys Phe Met
 580 585 590
 Met Asp Pro Asn Leu Gly Lys Lys Thr Cys Tyr Val Gln Phe Pro Gln
 595 600 605
 Arg Phe Asp Gly Ile Asp Leu His Asp Arg Tyr Ala Asn Arg Asn Ile
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 Val Phe Phe Asp Ile Asn Leu Lys Gly Leu Asp Gly Ile Gln Gly Pro
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 Val Tyr Val Gly Thr Gly Cys Cys Phe Asn Arg Gln Ala Leu Tyr Gly
 645 650 655
 Tyr Asp Pro Val Leu Thr Glu Glu Asp Leu Glu Pro Asn Ile Ile Ile
 660 665 670
 Lys Ser Cys Cys Gly Ser Arg Lys Lys Gly Lys Gly Asn Lys Lys
 675 680 685
 Tyr Ile Asp Lys Asn Arg Ala Leu Lys Arg Thr Glu Ser Thr Ala Pro
 690 695 700
 Ile Phe Asn Met Glu Asp Ile Glu Glu Gly Ile Glu Gly Tyr Asp Asp
 705 710 715 720
 Glu Arg Ser Phe Leu Met Ala Gln Ser Tyr Glu Lys Arg Phe Gly Gln
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 740 745 750
 Pro Ser Thr Asn Ser Ala Thr Leu Leu Lys Glu Ala Ile His Val Ile
 755 760 765
 Ser Cys Gly Tyr Glu Asp Lys Thr Glu Trp Gly Lys Glu Ile Gly Trp
 770 775 780
 Ile Tyr Gly Ser Val Thr Glu Asp Ile Leu Thr Gly Phe Lys Met His
 785 790 795 800
 Thr Arg Gly Trp Ile Ser Ile Tyr Cys Met Pro Pro Arg Pro Ala Phe
 805 810 815
 Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp Arg Leu Asn Gln Val Leu
 820 825 830
 Arg Trp Ala Leu Gly Ser Ile Glu Ile Leu Leu Ser Arg His Cys Pro
 835 840 845
 Ile Trp Tyr Gly Tyr Ser Gly Arg Leu Lys Phe Leu Glu Arg Leu Ala
 850 855 860
 Tyr Ile Asn Thr Ile Val Tyr Pro Leu Thr Ser Ile Pro Leu Leu Ala
 865 870 875 880

Tyr Cys Thr Leu Pro Ala Ile Cys Leu Leu Thr Gly Lys Phe Ile Val
 885 890 895
 Pro Glu Ile Ser Asn Tyr Ala Ser Ile Trp Phe Ile Leu Leu Phe Val
 900 905 910
 Ser Ile Phe Ser Thr Gly Ile Leu Glu Leu Arg Trp Ser Gly Val Thr
 915 920 925
 Leu Glu Asp Trp Trp Arg Asn Glu Gln Phe Trp Val Ile Gly Gly Thr
 930 935 940
 Ser Ala His Leu Phe Ala Val Phe Gln Gly Leu Leu Lys Val Leu Ala
 945 950 955 960
 Gly Ile Asp Thr Asn Phe Thr Val Thr Ser Lys Ala Ser Asp Glu Asp
 965 970 975
 Gly Asp Phe Ala Glu Leu Tyr Val Phe Lys Trp Thr Ser Leu Leu Ile
 980 985 990
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 995 1000 1005
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 Gly Arg Leu Phe Phe Ala Ile Trp Val Ile Val His Leu Tyr Pro Phe
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 Leu Lys Gly Leu Leu Gly Arg Gln Asn Arg Thr Pro Thr Ile Val Ile
 1045 1050 1055
 Val Trp Ser Val Leu Ala Ser Ile Phe Ser Leu Leu Trp Val Arg
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 <211> 1560
 <212> DNA
 <213> Glycine max

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 aatgcacttg ttcgagtgtc agcagtcctt actaatggac ctttcttatt gaatcttgc 660

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<211> 431

<212> PRT

<213> Glycine max

<400> 28

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Thr	Val	Leu	Ser	Ile	Leu	Ser	Val	Asp	Tyr	Pro	Val	Asp	Lys	Val	Ser	
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Cys	Tyr	Val	Ser	Asp	Asp	Gly	Ala	Ala	Met	Leu	Thr	Phe	Glu	Ala	Leu	
														50	55	60

Ala	Glu	Thr	Ser	Glu	Phe	Ala	Arg	Lys	Trp	Val	Pro	Phe	Ser	Lys	Lys		
														65	70	75	80

Tyr	Asn	Ile	Glu	Pro	Arg	Ala	Pro	Glu	Trp	Tyr	Phe	Ala	Gln	Lys	Ile	
														85	90	95

Asp	Tyr	Leu	Lys	Asp	Lys	Val	Gln	Pro	Ser	Phe	Val	Lys	Asp	Arg	Arg	
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Ala	Met	Lys	Arg	Glu	Tyr	Glu	Glu	Phe	Lys	Ile	Arg	Ile	Asn	Gly	Leu	
														115	120	125

Val	Ala	Lys	Ala	Gln	Lys	Ile	Pro	Glu	Glu	Gly	Trp	Val	Met	Gln	Asp	
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Gly	Thr	Pro	Trp	Pro	Gly	Asn	Asn	Thr	Arg	Asp	His	Pro	Gly	Met	Ile		
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Gln	Val	Phe	Leu	Gly	Gln	Ser	Gly	Gly	Leu	Asp	Thr	Glu	Gly	Asn	Glu	
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Leu	Pro	Arg	Leu	Val	Tyr	Val	Ser	Arg	Glu	Lys	Arg	Pro	Gly	Phe	Gln	
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His His Lys Lys Ala Gly Ala Met Asn Ala Leu Val Arg Val Ser Ala
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 Val Leu Thr Asn Gly Pro Phe Leu Leu Asn Leu Asp Cys Asp His Tyr
 210 215 220
 Ile Asn Asn Ser Lys Ala Leu Arg Glu Ala Met Cys Phe Met Met Asp
 225 230 235 240
 Pro Asn Leu Gly Lys Asn Val Cys Tyr Val Gln Phe Pro Gln Arg Phe
 245 250 255
 Asp Gly Ile Asp Arg Asn Asp Arg Tyr Ala Asn Arg Asn Thr Val Phe
 260 265 270
 Phe Asp Ile Asn Leu Arg Gly Leu Asp Gly Ile Gln Gly Pro Val Tyr
 275 280 285
 Val Gly Thr Gly Cys Val Phe Asn Arg Thr Ala Leu Tyr Gly Tyr Glu
 290 295 300
 Pro Pro Ile Lys Pro Lys His Lys Lys Pro Gly Phe Leu Ser Ser Leu
 305 310 315 320
 Cys Gly Gly Asn Arg Lys Lys Arg Ser Lys Ser Ser Lys Lys Gly Ser
 325 330 335
 Asp Lys Lys Lys Ser Ser Lys Asn Val Asp Pro Thr Val Pro Ile Phe
 340 345 350
 Ser Leu Glu Asp Ile Glu Glu Gly Val Glu Gly Ala Gly Phe Asp Asp
 355 360 365
 Glu Lys Ser Leu Leu Met Ser Gln Met Ser Leu Glu Lys Arg Phe Gly
 370 375 380
 Gln Ser Ala Val Phe Val Ala Ser Thr Leu Met Glu Asn Gly Gly Val
 385 390 395 400
 Pro Gln Ser Ala Thr Pro Glu Thr Leu Leu Lys Glu Ala Ile His Val
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 420 425 430

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 <211> 3626
 <212> DNA
 <213> Triticum aestivum

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ctccgtttcc	ctatgtgaat	cattcaccaa	atccgtcaag	ggagttctcc	ggcagtattg	660
ggaatgttgc	ctggaaagag	agagttgatg	gctggaaaat	gaagcaggac	aagggtgcga	720
tccccatgac	taatggaca	agcattgctc	cctctgaagg	tcgggcagct	actgacatcg	780
atgcatactac	tgaatacacaac	atggaagacg	cttactgaa	tgatgaaact	cgccagcctc	840
tatctagaaa	agtccccatt	gcttcctcca	aaataaatcc	ctacagaatg	gtcattgttc	900
tgcgggttgt	tgttctaagc	atcttcctgc	actaccgtct	cacaatcct	gtgcgtatg	960
catacccaact	gtggctttta	tctgttatat	gtgagatttg	gtttgctta	tcctggatac	1020
tggatcagtt	cccgaaagtgg	tttccaatca	accgggagac	ctaccttgat	agactggctt	1080
taaggatatga	ccgagaaggt	gaaccgtctc	agttggctgc	tgttgacata	tttgcagta	1140
cagtcgaccc	cttgaaggag	ccacctatcg	tcactgccaa	cactgtgcta	tccattcttgc	1200
ctgttgatta	tcccgtggac	aaggctctt	gctatgtatc	tgatgacgga	gcttcaatgc	1260
tgacttttga	cgcattggct	gagacttcag	agtttgcgtag	gaaatggta	ccatitgtga	1320
agaagtatga	cattgaaccc	agagctcccg	agttttactt	ttgccagaaa	attgattacc	1380
tgaaagacaa	agtccagct	tcattttgtta	aagaccgccc	ggccatgaag	agagaatatg	1440
aagaatttaa	aatcaggata	aatgcccstag	tttctaaggc	attgaaagtc	cccgaggaag	1500
gatggatcat	gcaagatggc	acaccatggc	caggaaacaa	taccaggat	catcctggaa	1560
tgattcaggt	tttcccttgtt	cacagtggtg	gccttgatac	tgagggtaat	gagctcccc	1620
gtttagtttta	tgtgtctcg	gaaaagcgctc	ctgggttcca	gcaccacaag	aaggctggtg	1680
ccatgaatgc	ccttggctcg	gtctcagctg	tccttactaa	tggacaatac	atgttgaatc	1740
ttgattgtga	tcactacatc	aacaacagca	aggctgtccg	agaagctatg	tgcttcctaa	1800
tggatccaaa	ccttaggtccg	caagtctgtt	atgtgcagtt	cccacaaagg	tttgatggaa	1860
ttgataggaa	tgatcgatat	gcaaacagga	acactgtctt	ttttgatatt	aacttgaggg	1920
gccttgacgg	cattcaagga	ccagtttatg	tggaaactgg	ttgtgtttc	aacagaacag	1980
ctatctatgg	ttatgagccc	ccaattaagg	cgaagaagcc	aggtttcttgc	gcatcactat	2040
gtgggggca	gaagaaggca	agcaagtc当地	agaaaaggag	ctcagataag	aaaaaagtgc当地	2100
acaagcatgt	ggacagttct	gttccagttat	tcaatctcg	agacatagag	gagggtgtt当地	2160
aaggtgctgg	gtttgatgtat	gagaaatcag	ttctcatgtc	tcaaattgagc	ttagagaaga	2220
gatttggcca	gtcagcagca	tttggcttgc当地	ccactctgtat	ggaatatgg	ggtggcctc当地	2280
agtccctccac	tccagaatct	cttttggaaag	aaagtatcca	tgtcataatgt	tgtggctatg	2340
aggacaagtc	tgaatgggaa	actgagattt	gttggatcta	tggatctgtc	acagaagata	2400
ttcttactgg	attcaagatg	cacgcaagag	gctggcggtc当地	agtctattgc当地	atgccaagc当地	2460
gcccagctt	caagggatct	gccccatca	atcttcaga	tcgtctgaac	caagtgtc当地	2520
ggtgggctct	cgggtctgtt	gaaatttctt	ttagccggca	ttggccctta	tgttatggct	2580
acggaggggcg	cctcaagttc	ctggagagat	tgccttacat	caacaccacc	atttaccac	2640
taacctctt	cccgcttcta	gtcttattgt	tattgcctgc	tatctgtctg	ctcaactggaa	2700
agttcatcat	gccagagatt	agcaacttgg	ccagtatctg	gttcatttgc当地	cttccctt当地	2760
caattttcgc	cactggatc	tttggatgt	ggggagttgg	tgttggcatt	gacgagttgg	2820
ggaggaatga	acagttctgg	gtcattggag	gtatctctgc当地	acatctgttt	gccgtctt当地	2880
agggtcttct	gaaggtgctt	gcccgtatcg	acaccaactt	cactgtcacc	tcaaaggct当地	2940
atgacgaaga	aggcgacttt	gctgagotct	acatgttcaa	gtggacgacg	cttctcatcc	3000
ctccgacgac	cattttgatc	attaacatgg	tttggatgtc当地	tgctggcacc	tcctacgcca	3060
tcaacagttgg	ttaccaatca	tggggccgc当地	tctttgggaa	gtcttcttt	gccttctggg	3120
tgattgttca	tttataccca	ttccctcaagg	gtcttattgg	caggcaaaac	cgcacaccga	3180
cgattgtcat	cgtctggct	gtccctcotcg	tttcttatctt	tccttgc当地	tgggttgc当地	3240
ttgatccatt	cactaccgt	ctcgctggcc	caaataatcca	aacctgtggc	atcaactgtc	3300
aggaaagttgg	gagtttgc当地	agacagaaaa	tataacagtg	atcgagacaac	aaccgc当地	3360
gccagagaat	atttatgttgc当地	gggttgc当地	ttactacgtt	tgagaaagtt	gtcaaaattg	3420
agaaaacaca	tttgc当地	gatgtatag	accatctacc	gttttcatga	ggttaagctc	3480
ttttttttt	ggaacaaaagg	aatctcatttgc当地	gtaaacctat	aggaattttc当地	ctatgaggca	3540
cttggatttgc当地	taggaatgg	cctatgaaat	gttgc当地	ttatattat	aaattattcc	3600
tgtccttcac	attttggagg	agtttt				3626

<210> 30
<211> 1080
<212> PRT
<213> Triticum aestivum

<400> 30
 Met Asp Gly Asp Ala Asp Ala Leu Lys Ser Gly Arg His Gly Ala Gly
 1 5 10 15

 Asp Val Cys Gln Ile Cys Ala Asp Gly Leu Gly Thr Thr Leu Asp Gly
 20 25 30

 Asp Val Phe Thr Ala Cys Asp Val Cys Arg Phe Pro Val Cys Arg Pro
 35 40 45

 Cys Tyr Glu His Glu Arg Lys Glu Gly Thr Gln Ala Cys Leu Gln Cys
 50 55 60

 Lys Thr Lys Tyr Lys Arg His Arg Gly Ser Pro Ala Ile Arg Gly Glu
 65 70 75 80

 Glu Gly Asp Asp Thr Asp Ala Asp Asp Gly Ser Asp Phe Asn Tyr Pro
 85 90 95

 Ala Ser Gly Thr Glu Asp Gln Lys Gln Lys Ile Ala Asp Arg Met Arg
 100 105 110

 Ser Trp Arg Met Asn Thr Gly Gly Ser Gly Asn Val Gly His Pro Lys
 115 120 125

 Tyr Asp Ser Gly Glu Ile Gly Leu Ser Lys Tyr Asp Ser Gly Glu Ile
 130 135 140

 Pro Arg Gly Tyr Val Pro Ser Val Thr Asn Ser Gln Met Ser Gly Glu
 145 150 155 160

 Ile Pro Gly Ala Ser Pro Asp His His Met Met Ser Pro Thr Gly Asn
 165 170 175

 Ile Ser Arg Arg Ala Pro Phe Pro Tyr Val Asn His Ser Pro Asn Pro
 180 185 190

 Ser Arg Glu Phe Ser Gly Ser Ile Gly Asn Val Ala Trp Lys Glu Arg
 195 200 205

 Val Asp Gly Trp Lys Met Lys Gln Asp Lys Gly Ala Ile Pro Met Thr
 210 215 220

 Asn Gly Thr Ser Ile Ala Pro Ser Glu Gly Arg Ala Ala Thr Asp Ile
 225 230 235 240

 Asp Ala Ser Thr Glu Tyr Asn Met Glu Asp Ala Leu Leu Asn Asp Glu
 245 250 255

 Thr Arg Gln Pro Leu Ser Arg Lys Val Pro Ile Ala Ser Ser Lys Ile
 260 265 270

 Asn Pro Tyr Arg Met Val Ile Val Leu Arg Leu Val Val Leu Ser Ile
 275 280 285

 Phe Leu His Tyr Arg Leu Thr Asn Pro Val Arg Asn Ala Tyr Pro Leu
 290 295 300

 Trp Leu Leu Ser Val Ile Cys Glu Ile Trp Phe Ala Leu Ser Trp Ile
 305 310 315 320

Leu Asp Gln Phe Pro Lys Trp Phe Pro Ile Asn Arg Glu Thr Tyr Leu
 325 330 335

 Asp Arg Leu Ala Leu Arg Tyr Asp Arg Glu Gly Glu Pro Ser Gln Leu
 340 345 350

 Ala Ala Val Asp Ile Phe Val Ser Thr Val Asp Pro Leu Lys Glu Pro
 355 360 365

 Pro Ile Val Thr Ala Asn Thr Val Leu Ser Ile Leu Ala Val Asp Tyr
 370 375 380

 Pro Val Asp Lys Val Ser Cys Tyr Val Ser Asp Asp Gly Ala Ser Met
 385 390 395 400

 Leu Thr Phe Asp Ala Leu Ala Glu Thr Ser Glu Phe Ala Arg Lys Trp
 405 410 415

 Val Pro Phe Val Lys Lys Tyr Asp Ile Glu Pro Arg Ala Pro Glu Phe
 420 425 430

 Tyr Phe Cys Gln Lys Ile Asp Tyr Leu Lys Asp Lys Val Gln Pro Ser
 435 440 445

 Phe Val Lys Asp Arg Arg Ala Met Lys Arg Glu Tyr Glu Glu Phe Lys
 450 455 460

 Ile Arg Ile Asn Ala Leu Val Ser Lys Ala Leu Lys Val Pro Glu Glu
 465 470 475 480

 Gly Trp Ile Met Gln Asp Gly Thr Pro Trp Pro Gly Asn Asn Thr Arg
 485 490 495

 Asp His Pro Gly Met Ile Gln Val Phe Leu Gly His Ser Gly Gly Leu
 500 505 510

 Asp Thr Glu Gly Asn Glu Leu Pro Arg Leu Val Tyr Val Ser Arg Glu
 515 520 525

 Lys Arg Pro Gly Phe Gln His His Lys Lys Ala Gly Ala Met Asn Ala
 530 535 540

 Leu Val Arg Val Ser Ala Val Leu Thr Asn Gly Gln Tyr Met Leu Asn
 545 550 555 560

 Leu Asp Cys Asp His Tyr Ile Asn Asn Ser Lys Ala Val Arg Glu Ala
 565 570 575

 Met Cys Phe Leu Met Asp Pro Asn Leu Gly Pro Gln Val Cys Tyr Val
 580 585 590

 Gln Phe Pro Gln Arg Phe Asp Gly Ile Asp Arg Asn Asp Arg Tyr Ala
 595 600 605

 Asn Arg Asn Thr Val Phe Phe Asp Ile Asn Leu Arg Gly Leu Asp Gly
 610 615 620

 Ile Gln Gly Pro Val Tyr Val Gly Thr Gly Cys Val Phe Asn Arg Thr
 625 630 635 640

Ala Ile Tyr Gly Tyr Glu Pro Pro Ile Lys Ala Lys Lys Pro Gly Phe
 645 650 655
 Leu Ala Ser Leu Cys Gly Gly Lys Lys Lys Ala Ser Lys Ser Lys Lys
 660 665 670
 Arg Ser Ser Asp Lys Lys Ser Asn Lys His Val Asp Ser Ser Val
 675 680 685
 Pro Val Phe Asn Leu Glu Asp Ile Glu Glu Gly Val Glu Gly Ala Gly
 690 695 700
 Phe Asp Asp Glu Lys Ser Val Leu Met Ser Gln Met Ser Leu Glu Lys
 705 710 715 720
 Arg Phe Gly Gln Ser Ala Ala Phe Val Ala Ser Thr Leu Met Glu Tyr
 725 730 735
 Gly Gly Val Pro Gln Ser Ser Thr Pro Glu Ser Leu Leu Lys Glu Ala
 740 745 750
 Ile His Val Ile Ser Cys Gly Tyr Glu Asp Lys Ser Glu Trp Gly Thr
 755 760 765
 Glu Ile Gly Trp Ile Tyr Gly Ser Val Thr Glu Asp Ile Leu Thr Gly
 770 775 780
 Phe Lys Met His Ala Arg Gly Trp Arg Ser Val Tyr Cys Met Pro Lys
 785 790 795 800
 Arg Pro Ala Phe Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp Arg Leu
 805 810 815
 Asn Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu Ile Leu Phe Ser
 820 825 830
 Arg His Cys Pro Leu Trp Tyr Gly Tyr Gly Arg Leu Lys Phe Leu
 835 840 845
 Glu Arg Phe Ala Tyr Ile Asn Thr Thr Ile Tyr Pro Leu Thr Ser Leu
 850 855 860
 Pro Leu Leu Val Tyr Cys Ile Leu Pro Ala Ile Cys Leu Leu Thr Gly
 865 870 875 880
 Lys Phe Ile Met Pro Glu Ile Ser Asn Leu Ala Ser Ile Trp Phe Ile
 885 890 895
 Ala Leu Phe Leu Ser Ile Phe Ala Thr Gly Ile Leu Glu Met Arg Trp
 900 905 910
 Ser Gly Val Gly Ile Asp Glu Trp Trp Arg Asn Glu Gln Phe Trp Val
 915 920 925
 Ile Gly Gly Ile Ser Ala His Leu Phe Ala Val Phe Gln Gly Leu Leu
 930 935 940
 Lys Val Leu Ala Gly Ile Asp Thr Asn Phe Thr Val Thr Ser Lys Ala
 945 950 955 960

Asn Asp Glu Glu Gly Asp Phe Ala Glu Leu Tyr Met Phe Lys Trp Thr
 965 970 975
 Thr Leu Leu Ile Pro Pro Thr Thr Ile Leu Ile Ile Asn Met Val Gly
 980 985 990
 Val Val Ala Gly Thr Ser Tyr Ala Ile Asn Ser Gly Tyr Gln Ser Trp
 995 1000 1005
 Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe Trp Val Ile Val His
 1010 1015 1020
 Leu Tyr Pro Phe Leu Lys Gly Leu Met Gly Arg Gln Asn Arg Thr Pro
 1025 1030 1035 1040
 Thr Ile Val Ile Val Trp Ala Val Leu Leu Ala Ser Ile Phe Ser Leu
 1045 1050 1055
 Leu Trp Val Arg Val Asp Pro Phe Thr Thr Arg Leu Ala Gly Pro Asn
 1060 1065 1070
 Ile Gln Thr Cys Gly Ile Asn Cys
 1075 1080

 <210> 31
 <211> 685
 <212> PRT
 <213> *Gossypium hirsutum*

 <400> 31
 Arg Arg Trp Val Pro Phe Cys Lys Lys His Asn Val Glu Pro Arg Ala
 1 5 10 15
 Pro Glu Phe Tyr Phe Asn Glu Lys Ile Asp Tyr Leu Lys Asp Lys Val
 20 25 30
 His Pro Ser Phe Val Lys Glu Arg Arg Ala Met Lys Arg Glu Tyr Glu
 35 40 45
 Glu Phe Lys Val Arg Ile Asn Ala Leu Val Ala Lys Ala Gln Lys Lys
 50 55 60
 Pro Glu Glu Gly Trp Val Met Gln Asp Gly Thr Pro Trp Pro Gly Asn
 65 70 75 80
 Asn Thr Arg Asp His Pro Gly Met Ile Gln Val Tyr Leu Gly Ser Ala
 85 90 95
 Gly Ala Leu Asp Val Asp Gly Lys Glu Leu Pro Arg Leu Val Tyr Val
 100 105 110
 Ser Arg Glu Lys Arg Pro Gly Tyr Gln His His Lys Lys Ala Gly Ala
 115 120 125
 Glu Asn Ala Leu Val Arg Val Ser Ala Val Leu Thr Asn Ala Pro Phe
 130 135 140

Ile Leu Asn Leu Asp Cys Asp His Tyr Ile Asn Asn Ser Lys Ala Met
 145 150 155 160
 Arg Glu Ala Met Cys Phe Leu Met Asp Pro Gln Phe Gly Lys Lys Leu
 165 170 175
 Cys Tyr Val Gln Phe Pro Gln Arg Phe Asp Gly Ile Asp Arg His Asp
 180 185 190
 Arg Tyr Ala Asn Arg Asn Val Val Phe Phe Asp Ile Asn Met Leu Gly
 195 200 205
 Leu Asp Gly Leu Gln Gly Pro Val Tyr Val Gly Thr Gly Cys Val Phe
 210 215 220
 Asn Arg Gln Ala Leu Tyr Gly Tyr Asp Pro Pro Val Ser Glu Lys Arg
 225 230 235 240
 Pro Lys Met Thr Cys Asp Cys Trp Pro Ser Trp Cys Cys Cys Cys Cys
 245 250 255
 Gly Gly Ser Arg Lys Lys Ser Lys Lys Lys Gly Glu Lys Lys Gly Leu
 260 265 270
 Leu Gly Gly Leu Leu Tyr Gly Lys Lys Lys Lys Met Met Gly Lys Asn
 275 280 285
 Tyr Val Lys Lys Gly Ser Ala Pro Val Phe Asp Leu Glu Glu Ile Glu
 290 295 300
 Glu Gly Leu Glu Gly Tyr Glu Glu Leu Glu Lys Ser Thr Leu Met Ser
 305 310 315 320
 Gln Lys Asn Phe Glu Lys Arg Phe Gly Gln Ser Pro Val Phe Ile Ala
 325 330 335
 Ser Thr Leu Met Glu Asn Gly Gly Leu Pro Glu Gly Thr Asn Ser Thr
 340 345 350
 Ser Leu Ile Lys Glu Ala Ile His Val Ile Ser Cys Gly Tyr Glu Glu
 355 360 365
 Lys Thr Glu Trp Gly Lys Glu Ile Gly Trp Ile Tyr Gly Ser Val Thr
 370 375 380
 Glu Asp Ile Leu Thr Gly Phe Lys Met His Cys Arg Gly Trp Lys Ser
 385 390 395 400
 Val Tyr Cys Val Pro Lys Arg Pro Ala Phe Lys Gly Ser Ala Pro Ile
 405 410 415
 Asn Leu Ser Asp Arg Leu His Gln Val Leu Arg Trp Ala Leu Gly Ser
 420 425 430
 Val Glu Ile Phe Leu Ser Arg His Cys Pro Leu Trp Tyr Gly Tyr Gly
 435 440 445
 Gly Lys Leu Lys Trp Leu Glu Arg Leu Ala Tyr Ile Asn Thr Ile Val
 450 455 460

Tyr Pro Phe Thr Ser Ile Pro Leu Leu Ala Tyr Cys Thr Ile Pro Ala
 465 470 475 480
 Val Cys Leu Leu Thr Gly Lys Phe Ile Ile Pro Thr Leu Ser Asn Leu
 485 490 495
 Thr Ser Val Trp Phe Leu Ala Leu Phe Leu Ser Ile Ile Ala Thr Gly
 500 505 510
 Val Leu Glu Leu Arg Trp Ser Gly Val Ser Ile Gln Asp Trp Trp Arg
 515 520 525
 Asn Glu Gln Phe Trp Val Ile Gly Gly Val Ser Ala His Leu Phe Ala
 530 535 540
 Val Phe Gln Gly Leu Leu Lys Val Leu Ala Gly Val Asp Thr Asn Phe
 545 550 555 560
 Thr Val Thr Ala Lys Ala Ala Asp Asp Thr Glu Phe Gly Glu Leu Tyr
 565 570 575
 Leu Phe Lys Trp Thr Thr Leu Leu Ile Pro Pro Thr Thr Leu Ile Ile
 580 585 590
 Leu Asn Met Val Gly Val Val Ala Gly Val Ser Asp Ala Ile Asn Asn
 595 600 605
 Gly Tyr Gly Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe
 610 615 620
 Trp Val Ile Leu His Leu Tyr Pro Phe Leu Lys Gly Leu Met Gly Arg
 625 630 635 640
 Gln Asn Arg Thr Pro Thr Ile Val Val Leu Trp Ser Ile Leu Leu Ala
 645 650 655
 Ser Ile Phe Ser Leu Val Trp Val Arg Ile Asp Pro Phe Leu Pro Lys
 660 665 670
 Gln Thr Gly Pro Val Leu Lys Gln Cys Gly Val Glu Cys
 675 680 685

 <210> 32
 <211> 701
 <212> PRT
 <213> *Gossypium hirsutum*

 <400> 32
 Asp Tyr Pro Val Glu Lys Val Ser Cys Tyr Val Ser Asp Asp Gly Ala
 1 5 10 15

 Ala Met Leu Thr Phe Glu Ala Leu Ser Glu Thr Ser Glu Phe Ala Arg
 20 25 30

 Lys Trp Val Pro Phe Cys Lys Lys Tyr Asn Ile Glu Pro Arg Ala Pro
 35 40 45

 Glu Trp Tyr Phe Ala Gln Lys Ile Asp Tyr Leu Lys Asp Lys Val Gln
 50 55 60

Thr Ser Phe Val Lys Glu Arg Arg Ala Met Lys Arg Glu Tyr Glu Glu
 65 70 75 80
 Phe Lys Val Arg Val Asn Gly Leu Val Ala Lys Ala Gln Lys Val Pro
 85 90 95
 Glu Glu Gly Trp Ile Met Gln Asp Gly Thr Pro Trp Pro Gly Asn Asn
 100 105 110
 Thr Arg Asp His Pro Gly Met Ile Gln Val Phe Leu Gly Gln Ser Gly
 115 120 125
 Gly Leu Asp Ala Glu Gly Asn Glu Leu Pro Arg Leu Val Tyr Val Ser
 130 135 140
 Arg Glu Lys Arg Pro Gly Phe Gln His His Lys Lys Ala Gly Ala Met
 145 150 155 160
 Asn Ala Leu Val Arg Val Ser Ala Val Leu Thr Asn Gly Ala Phe Leu
 165 170 175
 Leu Asn Leu Asp Cys Asp His Tyr Ile Asn Asn Ser Lys Ala Leu Arg
 180 185 190
 Glu Ala Met Cys Phe Leu Met Asp Pro Asn Leu Gly Lys Gln Val Cys
 195 200 205
 Tyr Val Gln Phe Pro Gln Arg Phe Asp Gly Ile Asp Arg Asn Asp Arg
 210 215 220
 Tyr Ala Asn Arg Asn Thr Val Phe Phe Asp Ile Asn Leu Arg Gly Leu
 225 230 235 240
 Asp Gly Ile Gln Gly Pro Val Tyr Val Gly Thr Gly Cys Val Phe Asn
 245 250 255
 Arg Thr Ala Leu Tyr Gly Tyr Glu Pro Pro Leu Lys Pro Lys His Arg
 260 265 270
 Lys Thr Gly Ile Leu Ser Ser Leu Cys Gly Gly Ser Arg Lys Lys Ser
 275 280 285
 Ser Lys Ser Ser Lys Lys Gly Ser Asp Lys Lys Ser Gly Lys His
 290 295 300
 Val Asp Ser Thr Val Pro Val Phe Asn Leu Glu Asp Ile Glu Glu Gly
 305 310 315 320
 Val Glu Gly Ala Gly Phe Asp Asp Glu Lys Ser Leu Leu Met Ser Gln
 325 330 335
 Met Ser Leu Glu Lys Arg Phe Gly Gln Ser Ala Val Phe Val Ala Ser
 340 345 350
 Thr Leu Met Glu Asn Gly Gly Val Pro Gln Ser Ala Thr Pro Glu Thr
 355 360 365
 Leu Leu Lys Glu Ala Ile His Val Ile Ser Cys Gly Tyr Glu Asp Lys
 370 375 380

Thr Asp Trp Gly Ser Glu Ile Gly Trp Ile Tyr Gly Ser Val Thr Glu
 385 390 395 400
 Asp Ile Leu Thr Gly Phe Lys Met His Ala Arg Gly Trp Arg Ser Ile
 405 410 415
 Tyr Cys Met Pro Lys Arg Pro Ala Phe Lys Gly Ser Ala Pro Ile Asn
 420 425 430
 Leu Ser Asp Arg Leu Asn Gln Val Leu Arg Trp Ala Leu Gly Ser Val
 435 440 445
 Glu Ile Leu Phe Ser Arg His Cys Pro Ile Trp Tyr Gly Tyr Ser Gly
 450 455 460
 Arg Leu Lys Trp Leu Glu Arg Phe Ala Tyr Val Asn Thr Thr Ile Tyr
 465 470 475 480
 Pro Val Thr Ala Ile Pro Leu Leu Met Tyr Cys Thr Leu Pro Ala Val
 485 490 495
 Cys Leu Leu Thr Asn Lys Phe Ile Ile Pro Gln Ile Ser Asn Leu Ala
 500 505 510
 Ser Ile Trp Phe Ile Ser Leu Phe Leu Ser Ile Phe Ala Thr Gly Ile
 515 520 525
 Leu Lys Met Lys Trp Asn Gly Val Gly Ile Asp Gln Trp Trp Arg Asn
 530 535 540
 Glu Gln Phe Trp Val Ile Gly Gly Val Ser Ala His Leu Phe Ala Val
 545 550 555 560
 Phe Gln Gly Leu Leu Lys Val Leu Ala Gly Ile Asp Thr Asn Phe Thr
 565 570 575
 Val Thr Ser Lys Ala Ser Asp Glu Asp Gly Asp Phe Ala Glu Leu Tyr
 580 585 590
 Met Phe Lys Trp Thr Thr Leu Leu Ile Pro Pro Thr Thr Leu Leu Ile
 595 600 605
 Ile Asn Leu Val Gly Val Val Ala Gly Ile Ser Tyr Val Ile Asn Ser
 610 615 620
 Gly Tyr Gln Ser Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe
 625 630 635 640
 Trp Val Ile Ile His Leu Tyr Pro Phe Leu Lys Gly Leu Met Gly Arg
 645 650 655
 Gln Asn Arg Thr Pro Thr Ile Val Val Val Trp Ser Ile Leu Leu Ala
 660 665 670
 Ser Ile Phe Ser Leu Leu Trp Val Arg Ile Asp Pro Phe Thr Thr Arg
 675 680 685
 Val Thr Gly Pro Asp Val Glu Gln Cys Gly Ile Asn Cys
 690 695 700

<210> 33
 <211> 1065
 <212> PRT
 <213> Arabidopsis thaliana

<400>	33														
Met	Glu	Ser	Glu	Gly	Glu	Thr	Ala	Gly	Lys	Pro	Met	Lys	Asn	Ile	Val
1				5					10						15
Pro	Gln	Thr	Cys	Gln	Ile	Cys	Ser	Asp	Asn	Val	Gly	Lys	Thr	Val	Asp
		20					25						30		
Gly	Asp	Arg	Phe	Val	Ala	Cys	Asp	Ile	Cys	Ser	Phe	Pro	Val	Cys	Arg
	35					40							45		
Pro	Cys	Tyr	Glu	Tyr	Glu	Arg	Lys	Asp	Gly	Asn	Gln	Ser	Cys	Pro	Gln
	50					55					60				
Cys	Lys	Thr	Arg	Tyr	Lys	Arg	Leu	Lys	Gly	Ser	Pro	Ala	Ile	Pro	Gly
	65				70				75					80	
Asp	Lys	Asp	Glu	Asp	Gly	Leu	Ala	Asp	Glu	Gly	Thr	Val	Glu	Phe	Asn
		85						90					95		
Tyr	Pro	Gln	Lys	Glu	Lys	Ile	Ser	Glu	Arg	Met	Leu	Gly	Trp	His	Leu
		100					105						110		
Thr	Arg	Gly	Lys	Gly	Glu	Glu	Met	Gly	Glu	Pro	Gln	Tyr	Asp	Lys	Glu
	115					120						125			
Val	Ser	His	Asn	His	Leu	Pro	Arg	Leu	Thr	Ser	Arg	Gln	Asp	Thr	Ser
	130					135				140					
Gly	Glu	Phe	Ser	Ala	Ala	Ser	Pro	Glu	Arg	Leu	Ser	Val	Ser	Ser	Thr
	145				150				155				160		
Ile	Ala	Gly	Gly	Lys	Arg	Leu	Pro	Tyr	Ser	Ser	Asp	Val	Asn	Gln	Ser
		165					170					175			
Pro	Asn	Arg	Arg	Ile	Val	Asp	Pro	Val	Gly	Leu	Gly	Asn	Val	Ala	Trp
		180				185					190				
Lys	Glu	Arg	Val	Asp	Gly	Trp	Lys	Met	Lys	Gln	Glu	Lys	Asn	Thr	Gly
	195					200					205				
Pro	Val	Ser	Thr	Gln	Ala	Ala	Ser	Glu	Arg	Gly	Gly	Val	Asp	Ile	Asp
	210					215				220					
Ala	Ser	Thr	Asp	Ile	Leu	Ala	Asp	Glu	Ala	Leu	Leu	Asn	Asp	Glu	Ala
	225					230				235			240		
Arg	Gln	Pro	Leu	Ser	Arg	Lys	Val	Ser	Ile	Pro	Ser	Ser	Arg	Ile	Asn
		245					250					255			
Pro	Tyr	Arg	Met	Val	Ile	Met	Leu	Arg	Leu	Val	Ile	Leu	Cys	Leu	Phe
			260			265					270				

Leu His Tyr Arg Ile Thr Asn Pro Val Pro Asn Ala Phe Ala Leu Trp
 275 280 285
 Leu Val Ser Val Ile Cys Glu Ile Trp Phe Ala Leu Ser Trp Ile Leu
 290 295 300
 Asp Gln Phe Pro Lys Trp Phe Pro Val Asn Arg Glu Thr Tyr Leu Asp
 305 310 315 320
 Arg Leu Ala Leu Arg Tyr Asp Arg Glu Gly Glu Pro Ser Gln Leu Ala
 325 330 335
 Ala Val Asp Ile Phe Val Ser Thr Val Asp Pro Leu Lys Glu Pro Pro
 340 345 350
 Leu Val Thr Ala Asn Thr Val Leu Ser Ile Leu Ala Val Asp Tyr Pro
 355 360 365
 Val Asp Lys Val Ser Cys Tyr Val Phe Asp Asp Gly Ala Ala Met Leu
 370 375 380
 Ser Phe Glu Ser Leu Ala Glu Thr Ser Glu Phe Ala Arg Lys Trp Val
 385 390 395 400
 Pro Phe Cys Lys Lys Tyr Ser Ile Glu Pro Arg Ala Pro Glu Trp Tyr
 405 410 415
 Phe Ala Ala Lys Ile Asp Tyr Leu Lys Asp Lys Val Gln Thr Ser Phe
 420 425 430
 Val Lys Asp Arg Arg Ala Met Lys Arg Glu Tyr Glu Glu Phe Lys Ile
 435 440 445
 Arg Ile Asn Ala Leu Val Ser Lys Ala Leu Lys Cys Pro Glu Glu Gly
 450 455 460
 Trp Val Met Gln Asp Gly Thr Pro Trp Pro Gly Asn Asn Thr Gly Asp
 465 470 475 480
 His Pro Gly Met Ile Gln Val Phe Leu Gly Gln Asn Gly Gly Leu Asp
 485 490 495
 Ala Glu Gly Asn Glu Leu Pro Arg Leu Val Tyr Val Ser Arg Glu Lys
 500 505 510
 Arg Pro Gly Phe Gln His His Lys Lys Ala Gly Ala Met Asn Ala Leu
 515 520 525
 Val Arg Val Ser Ala Val Leu Thr Asn Gly Pro Phe Ile Leu Asn Leu
 530 535 540
 Asp Cys Asp His Tyr Ile Asn Asn Ser Lys Ala Leu Arg Glu Ala Met
 545 550 555 560
 Cys Phe Leu Met Asp Pro Asn Leu Gly Lys Gln Val Cys Tyr Val Gln
 565 570 575
 Phe Pro Gln Arg Phe Asp Gly Ile Asp Lys Asn Asp Arg Tyr Ala Asn
 580 585 590

Arg Asn Thr Val Phe Phe Asp Ile Asn Leu Arg Gly Leu Asp Gly Ile
 595 600 605
 Gln Gly Pro Val Tyr Val Gly Thr Gly Cys Val Phe Asn Arg Thr Ala
 610 615 620
 Leu Tyr Gly Tyr Glu Pro Pro Ile Lys Val Lys His Lys Lys Pro Ser
 625 630 635 640
 Leu Leu Ser Lys Leu Cys Gly Gly Ser Arg Lys Lys Asn Ser Lys Ala
 645 650 655
 Lys Lys Glu Ser Asp Lys Lys Ser Gly Arg His Thr Asp Ser Thr
 660 665 670
 Val Pro Val Phe Asn Leu Asp Asp Ile Glu Glu Gly Val Glu Gly Ala
 675 680 685
 Gly Phe Asp Asp Glu Lys Ala Leu Leu Met Ser Gln Met Ser Leu Glu
 690 695 700
 Lys Arg Phe Gly Gln Ser Ala Val Phe Val Ala Ser Thr Leu Met Glu
 705 710 715 720
 Asn Gly Gly Val Pro Pro Ser Ala Thr Pro Glu Asn Leu Leu Lys Glu
 725 730 735
 Ala Ile His Val Ile Ser Cys Gly Tyr Glu Asp Lys Ser Asp Trp Gly
 740 745 750
 Met Glu Ile Gly Trp Ile Tyr Gly Ser Val Thr Glu Asp Ile Leu Thr
 755 760 765
 Gly Phe Lys Met His Ala Arg Gly Trp Arg Ser Ile Tyr Cys Met Pro
 770 775 780
 Lys Leu Pro Ala Phe Lys Gly Ser Ala Pro Ile Asn Leu Ser Asp Arg
 785 790 795 800
 Leu Asn Gln Val Leu Arg Trp Ala Leu Gly Ser Val Glu Ile Leu Phe
 805 810 815
 Ser Arg His Cys Pro Ile Trp Tyr Gly Tyr Asn Gly Arg Leu Lys Phe
 820 825 830
 Leu Glu Arg Phe Ala Tyr Val Asn Thr Thr Ile Tyr Pro Ile Thr Ser
 835 840 845
 Ile Pro Leu Leu Met Tyr Cys Thr Leu Leu Ala Val Cys Leu Phe Thr
 850 855 860
 Asn Gln Phe Ile Ile Pro Gln Ile Ser Asn Ile Ala Ser Ile Trp Phe
 865 870 875 880
 Leu Ser Leu Phe Leu Ser Ile Phe Ala Thr Gly Ile Leu Glu Met Arg
 885 890 895
 Trp Ser Gly Val Gly Ile Asp Glu Trp Trp Arg Asn Glu Gln Phe Trp
 900 905 910

Val Ile Gly Gly Val Ser Ala His Leu Phe Ala Val Phe Gln Gly Ile
915 920 925

Leu Lys Val Leu Ala Gly Ile Asp Thr Asn Phe Thr Val Thr Ser Lys
930 935 940

Ala Ser Asp Glu Asp Gly Asp Phe Ala Glu Leu Tyr Leu Phe Lys Trp
945 950 955 960

Thr Thr Leu Leu Ile Pro Pro Thr Thr Leu Leu Ile Val Asn Leu Val
965 970 975

Gly Val Val Ala Gly Val Ser Tyr Ala Ile Asn Ser Gly Tyr Gln Ser
980 985 990

Trp Gly Pro Leu Phe Gly Lys Leu Phe Phe Ala Phe Trp Val Ile Val
995 1000 1005

His Leu Tyr Pro Phe Leu Lys Gly Leu Met Gly Arg Gln Asn Arg Thr
1010 1015 1020

Pro Thr Ile Val Val Val Trp Ser Val Leu Leu Ala Ser Ile Phe Ser
1025 1030 1035 1040

Leu Leu Trp Val Arg Ile Asp Pro Phe Thr Ser Arg Val Thr Gly Pro
1045 1050 1055

Asp Ile Leu Glu Cys Gly Ile Asn Cys
1060 1065

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